MINISTRY OF HOUSING, LAND AND URBAN DEVELOPMENT
MALE', REPUBLIC OF MALDIVES

Iulaan no: (IUL)471-CDS1/1/2024/2

TERMS OF REFERENCE

HOUSING APPLICATION SYSTEM DEVELOPMENT

1.   GENERAL INFORMATION AND BACKGROUND

In adherence to the President's commitment within the first 100 days, the Ministry has initiated efforts to create an online portal for housing applications. This platform will enable citizens to apply for government (social) housing and access their standing on the verified priority list. The primary objective is to enhance transparency and establish uniform criteria for the government's social housing allocation process, addressing the concerns of citizens.

To develop the Housing Application Portal, the Ministry is seeking a capable party for the development of the portal.

2.   KEY REQUIREMENTS

1. Design and implement a contemporary web portal utilizing optimal web development frameworks, adhering to current web design standards.
2. Develop APIs for integration with local Authority applications or incorporate local Authority APIs into the system.
3. Architect the web portal and database to enable future mobile application development.
4. Incorporate robust user management with login functionality and tiered user rights.
5. Facilitate applicant abilities to apply for housing programs, loans, and subsidies; view application status; request rent permits and maintenance; access payment history for social housing; submit complaints; and monitor housing savings contributions.
6. Develop a back-end administrative portal to allow Ministry staff to evaluate and process applications, manage schemes and loans, manage data types, analyze data, and generate reports.
7. Dynamic custom forms builder with ability to manage the fields, custom data lists and dynamic pipeline.
8. Search function for other integrated Government APIs from admin portal
9. Access to other government organizations for processing application sections as defined in application settings.
10. Historical data migration from previous housing systems.
11. Web portal should support ability to switch from Dhivehi to English versions.
12. Perform database design, modifications, and implementation to support application requirements.

13. Incorporate graphical representations and visual interactions for reporting.
14. Ensure cross-browser and mobile browser compatibility.
15. Provision testing server for daily software deployment.
16. Train designated Ministry staff on the final version usage, providing user guides/manuals.
17. Provide regular development status reports to the Ministry team.

3. **SCOPE OF WORK**

The scope of this project includes the following tasks:

1. Housing Portal Development

1. **Design and Development:**
   - 1.1 Site Architecture and Design:
     - Conduct stakeholder meetings to gather requirements and refine site architecture accordingly.
     - Develop detailed wireframes and visual designs adhering to modern web standards and Ministry branding guidelines.
   - 1.2 Front-end Development:
     - Implement a responsive front-end portal using industry-standard frameworks like React, Angular, etc.
     - Ensure cross-browser compatibility and optimal user experience on various devices.
   - 1.3 Back-end Development:
     - Develop a secure and scalable back-end administrative portal.
     - Implement multi-layered security measures to protect sensitive data.
   - 1.4 API Development:
     - Design and develop RESTful APIs with clear documentation for seamless integration with local systems.
     - Implement secure communication protocols and error handling.
   - 1.5 Database Design:
     - Create a robust and normalized MySql/MSSQL/NoSQL database schema to support the portal's functionality.
     - Optimize database queries for efficient data retrieval and storage.
   - 1.6 Access Control:
     - Implement a granular role-based access control system to manage user permissions effectively.
     - Regularly review and update access control policies based on evolving requirements.
   - 1.7 User Functionality:
     - Ensure a user-friendly interface for citizens to submit applications, track status, make payments, and log complaints.
     - Develop an intuitive administrative interface with features for efficient application evaluation and processing.
   - 1.8 Reporting and Data Visualization:

- Integrate advanced reporting features and meaningful data visualizations for actionable insights.
- Use industry-standard tools for analytics and reporting.

2. **Testing:**
   - 2.1 Test Cases:
     - Develop a comprehensive suite of test cases covering all functionalities and use cases.
     - Regularly update test cases to accommodate changes and enhancements.
   - 2.2 Testing Phases:
     - Conduct rigorous unit testing, integration testing, system testing, and UAT testing on various devices and browsers.
     - Implement automated testing where applicable to improve efficiency.
   - 2.3 Bug Fixing:
     - Establish a streamlined process for identifying, reproducing, and resolving software defects promptly.
     - Prioritize and categorize bugs based on severity and impact.

3. **Training & Implementation:**
   - 3.1 User Manuals and Training:
     - Develop detailed user manuals with step-by-step instructions for Ministry administrators.
     - Conduct hands-on training sessions to ensure effective portal usage and troubleshooting.
   - 3.2 Transition to Production:
     - Plan and execute a seamless transition of the web portal and databases to production servers.
     - Implement rollback procedures in case of unforeseen issues during the transition.
   - 3.3 Technical Support:
     - Establish a dedicated support system with defined response times for addressing post-implementation issues.
     - Provide ongoing training materials and resources for continuous learning.

4. **Maintenance:**
   - 4.1 Bug Fixes and Issue Resolution:
     - Implement a systematic approach for receiving, prioritizing, and resolving reported issues.
     - Establish a version control system to track changes and updates.
   - 4.2 Cloud Hosting Management:
     - Regularly monitor and optimize Microsoft Azure cloud hosting resources for performance and cost efficiency.
     - Implement automated scaling strategies to handle fluctuations in user traffic.
   - 4.3 Database Management:
     - Schedule regular automated database backups and conduct periodic data integrity checks.
     - Document and follow best practices for database maintenance.
   - 4.4 Cost Management:
     - Implement cost tracking and optimization measures for cloud hosting services.

- Provide periodic reports to the Ministry on hosting-related expenses.
- 4.5 Troubleshooting:
  - Develop a comprehensive troubleshooting guide for Efaas, DNR API, and domain-related issues.
  - Establish communication channels with relevant stakeholders for swift issue resolution.
- 4.6 Enhancements:
  - Conduct regular reviews with internal and external users to gather enhancement requests.
  - Prioritize enhancements based on strategic goals, user feedback, and regulatory requirements.
- 4.7 Performance Improvement:
  - Monitor system performance regularly using tools like Google Analytics and Azure diagnostics.
  - Implement optimizations based on insights gained from performance analytics.
- 4.8 Analytics and Reports:
  - Regularly analyze traffic data from Google Analytics and Microsoft Azure for continuous improvement.
  - Generate customized reports for the Ministry to aid in decision-making.
- 4.9 Documentation:
  - Maintain up-to-date documentation covering the software's architecture, codebase, and configuration settings.
  - Implement a documentation review process to ensure accuracy and completeness.
- 4.10 User Trainings:
  - Provide ongoing user training sessions to keep administrators updated on new features and best practices.
  - Develop a training calendar to cover different aspects of portal usage.
- 4.11 System Upgrade:
  - Plan and execute systematic system upgrades in collaboration with the Ministry.
  - Ensure thorough testing and user training before deploying upgrades to production.

2. Ministry Website Integration

The integration of the Housing Portal with the Ministry website involves creating a seamless connection between the two platforms. This connection ensures that any updates or changes made on the Housing Portal are instantly visible on the Ministry website. This integration is designed to be secure, meaning that sensitive data is protected, and it follows modern web standards for compatibility.

4. **TIMEFRAME**

The bidder should propose a detailed time frame for completing the project including milestones of this project.

5. REPORTING ARRANGMENTS

Operating under the guidance of the Ministry, the chosen contractor shall collaborate closely to deliver the outputs outlined in the Terms of Reference.

The selected contractor shall provide regular progress reports to the designated Ministry officials. Additionally, the contractor will appoint a representative to lead the development efforts and be accountable for consistent reporting.

6. QUALIFICATION AND EXPERIENCE

The Bidder must have housing related project experience in software development and management – developers who have experience in working on software projects related to the housing and real estate industry will be considered as an added advantage. This may include previous involvement in developing, maintaining, or enhancing software solutions for real estate management, property listings, housing database, or real estate.

In addition to the above requirement, the contractor shall prepare a qualified team and a lead developer to manage the contract.

The lead developer shall have the following qualifications:

1. Lead developer shall have a degree in Software Engineering / information technology or a degree in relevant field of work with a minimum of 5 years' experience.
2. Lead developer should demonstrate experience in enterprise level software development.
3. The lead developer should be well versed with the Microsoft azure platform for hosting databases and applications.
4. Familiarity with Microsoft .NET and Microsoft Azure will be an added advantage.
5. Good documentation skills.
6. Ability to work in a team.

7. EVALUATION OF THE PROPOSALS

Technical evaluation will be done based on the following criteria:

Category	Marks Allocated %	Evaluation Criteria
a) Academic Qualification of	10 %	Lead Developer: Academic qualification (40 marks), - Master's Degree: 40

Lead developer		- Bachelor's Degree: 20
		Total marks: 40
		Notes:
		- Reference letters must include details of work / projects completed.
b) Price	20 %	Formula below to be used to;
		Lowest price / price on proposal x percentage = Total % in price
c) Duration	30 %	Formula below to be used to;
		Shortest duration / duration on proposal x percentage = Total % in duration
c) Experience of the Team	40 %	Points for experience letters submitted with proposal / 50 x percentage = Total % in experience of the team.
		Reference letters must include details of work / projects completed.
		A maximum of five experience letters would be considered.
		For each letter 6 marks would be awarded, and if the experience letter is related to Government / SOE housing portals an additional 4 marks would be awarded. A maximum of 50 marks would be allocated.
Total	100%	

8.   FEE PROPOSAL AND PAYMENTS

The Bidder is expected to include the lump sum fee to carry out the tasks specified on the TOR in their proposal. The price proposed must be stated in both writing and in figures, and any proposal which has unclear statements may be rejected. The payments are made upon satisfactory completion and acceptance by the ministry for the deliverables.

The details as following:

No.	Phase (Deliverables / Conditions)	Fee (%)	Sum Up (%)
1.	Advance Payment	15%	15%
2.	Design & Development	40%	55%
3.	Testing, Bug fixing and Trainings	25%	80%
4.	Deployment to live	20%	100%

Note: The winner of the bid is required to present a performance guarantee of 2% of the total price prior to signing the contract.

9. CONTENTS OF PROPOSAL

1. Cover letter
2. Details of Team Member with role as per ANNEXURE 1 (Additional details to be attached as Annexure, including CVs of Team members, work experience letters in relevant field, and academic qualification details)
3. Price proposal & duration for the service as per the ANNEXTURE 2
4. Financial position of the bidder as per the ANNEXTURE 3
5. Average annual turnover for the bidder as per the ANNEXTURE 4
6. Tentative work plan (clearly defining the commencement and completion date)
7. Detailed methodology (including initial system analysis design report)
8. Letter of completion/Reference letters or similar assignments performed in past 5 years.
9. 2% of proposed price as performance guarantee prior to signing the contract.
10. 0.05% bid security (applicable for bids above MVR 500,000.00)

Additional Information required.

11. Corporate profile (including project portfolios)
12. Business Registration certificate.
13. Business profile document issued from Ministry of Economic Development
14. Goods and Services Tax Registration Certificates
15. Tax Clearance from Maldives Inland Revenue Authority (MIRA) obtained recently (Not exceeding 2 months from date of announcement)

10. PRE-BID MEETING & CLARIFICATIONS

For further information, please attend the information session held at the Ministry of Housing, Land & Urban Development (MHLUD) on 16 January 2024 at 10:00 hrs.

Ministry of Housing, Land & Urban Development
Email: bid@housing.gov.mv
Phone: + (960) 4004 700, + (960) 4004 735

11. SUBMISSION OF PROPOSAL

Proposals must be delivered in sealed envelopes titled "**HOUSING PORTAL APPLICATION for MINISTRY OF HOUSING, LAND & URBAN DEVELOPMENT**" together with the submitting party's name and address to the address below, on **16th January 2023 at 14:00 hrs** local time. Electronic submission is not permitted. Late proposals will be rejected. Proposals will be opened in the presence of proponents' representatives who choose to be present at the address below at the time of proposal opening.

Housing Department,
Ministry of Housing, Land & Urban Development
Ameenee Magu,
Maafannu, Male' 20392, Maldives
Tel: 4004700, 4004735
Email: bid@housing.gov.mv

ANNEXURE 1

Role	Name	Academic and Professional Qualification (Certificate are required to be presented)	Work Experience (Certificates/Reference Letter are required to be presented)
Lead Developer			

Details of proposed team (This forms a part of proposal)

ANNEXTURE 2

Price and Delivery Duration

Bidder Name: ………………………………………………………

Price:

	Amount (MVR)	*GST (MVR)*	*Total (MVR)*
Price for Service	……………………………	……………………………	……………………………
Price for Service in words.	……………………………	……………………………	……………………………

Delivery Duration (in Calendar Days): …………………………………………………………..

ANNEXTURE 3

Financial Position Form

Each Applicant must fill in this form

Financial Data for Previous 3 Years [MVR Equivalent]			
	Year 2022:	Year 2021:	Year 2020:

Information from Balance Sheet

Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			
Working Capital			

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

❑ Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
  • All such documents reflect the financial situation of the Bidder.
  • Historic financial statements must be complete, including all notes to the financial statements.
  • Historic financial statements must correspond to accounting periods

ANNEXTURE 4

<u>Average Annual Turnover</u>

Each Bidder must fill in this form

Annual Turnover Data for the Last 3 Years		
Year	Amount Currency	MVR Equivalent
2022		
2021		
2020		

Average Annual Turnover

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for contracts in progress or completed at the end of the period reported.